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United States Patent [19]

Volk

[11] **Patent Number:** 5,200,773[45] **Date of Patent:** Apr. 6, 1993[54] **DIAGNOSTIC INDIRECT
OPHTHALMOSCOPY CONTACT LENS
SYSTEM**[76] **Inventor:** Donald A. Volk, 9378 Jackson Ave.,
Mentor, Ohio 44060[21] **Appl. No.:** 604,531[22] **Filed:** Oct. 29, 1990**Related U.S. Application Data**[63] Continuation-in-part of Ser. No. 428,504, Oct. 27, 1989,
Pat. No. 5,046,836.[51] **Int. Cl.⁵** A61B 3/00[52] **U.S. Cl.** 351/219; 351/160 R[58] **Field of Search** 351/219, 205, 160 R[56] **References Cited****U.S. PATENT DOCUMENTS**

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Co.[57] **ABSTRACT**

A diagnostic indirect ophthalmoscopy lens device utilized for illumination and observation of the fundus of the eye may include a plus powered aspheric contact element and at least one anterior lens element which may also have aspheric surfaces and/or positive refractive power. The lens elements in combination act to illuminate and form an inverted aerial image of the fundus of the eye. A erecting optical system may be provided to reinvert the image produced by the lenses of the device, which facilitates examining or surgical procedures. The device may be a hand held device to enable easy manipulation, or may be a non-hand held device which maintains its position on the eye to be examined. The device may further include a separate source of illuminating light which allows proper illumination of the eye while avoiding reflections or the like.

20 Claims, 6 Drawing Sheets